

INORGANIC CHEMICAL ANALYSES OF GROUND - WATER SAMPLES

Table 1. Inorganic Chemical Analyses – Shallow Overburden Wells
(sample locations shown on Map 3135-1)

Sample Number	Sampling Date	pH in Lab	Constituents in milligrams per litre (mg/L)										Total Alkalinity (as mg/L CaCO ₃)	Total Hardness (as mg/L CaCO ₃)	Total Dissolved Solids (mg/L)	Specific Conductance in Lab (µmho/cm at 25° C)
			Total Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (as CaCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃ - N as N)				
365	5/9/61	7.6	0.16	—	—	—	—	—	—	4	—	—	196	188	—	320
479	—	7.5	2.60	—	—	—	—	—	—	17	—	5.0	193	184	—	—
553	—	7.7	0.25	—	—	—	—	—	—	5	—	0.07	197	314	—	—
1339	25/7/79	7.3	<0.5	99	33	11	2.7	324	56	13	0.1	1.6	324	364	480	715
4257	—	7.4	0.19	—	—	—	—	—	—	57	—	0.40	370	472	—	—
4577	—	8.1	0.14	—	—	—	—	—	—	28	—	14.0	163	322	—	—
5230	4/8/66	6.7	0.48	604	—	542	—	—	90	111	—	0.23	496	870	—	—
5282	26/6/77	7.6	0.10	86	20	6	5.1	231	39	13	0.1	8.9	231	296	407	578
5312	26/7/77	7.9	0.60	39	24	13	1.7	219	1	2	0.2	<0.1	219	196	254	390
5805	20/6/79	7.8	0.62	69	28	34	2.1	258	26	33	0.2	8	258	276	360	610
6400	4/7/79	7.8	0.70	60	18	7	1.1	229	7	1	0.1	<0.1	229	222	280	430
6637	26/6/77	8.3	0.15	107	18	3	0.8	224	29	59	0.1	4.2	224	343	473	663
6847	18/7/79	7.5	0.10	90	17	51	2.5	209	52	63	0.3	14	209	292	555	775
8321	26/6/77	8.0	<0.10	83	11	2	0.9	217	28	8	0.1	1.6	217	253	323	471
9609	4/7/79	7.6	0.45	90	5	6	3.8	191	52	9	0.1	0.5	191	244	335	495
9997	8/8/78	7.4	<0.05	117	12	5	1.6	260	67	8	0.1	1.7	260	340	490	590
10548	26/9/78	7.7	—	—	—	—	—	—	38	37	—	3.1	—	332	430	610
10560	8/8/78	7.9	<0.05	69	18	4	1.5	206	42	2	0.1	0.5	206	246	290	445
10563	8/8/78	7.0	0.11	187	14	10	3.6	354	43	25	<0.1	29	354	524	860	960
10564	8/8/78	7.5	<0.05	134	12	4	1.1	254	79	12	<0.1	9.6	254	384	545	690
11986	25/7/79	7.7	0.36	54	15	5	1.8	196	13	<0.1	0.1	0.1	196	196	245	378
12550	18/7/79	7.8	1.21	46	20	14	1.2	222	2	5	0.1	<0.1	222	198	270	414
12634	18/7/79	7.3	<0.05	126	17	7	1.2	317	17	20	<0.1	0.7	317	384	455	700
99990	18/7/79	7.7	<0.05	67	22	3	1.0	227	35	2	0.1	0.1	227	257	295	476

Table 2. Inorganic Chemical Analyses – Deep Overburden Wells
(sample locations shown on Map 3135-3)

Sample Number	Sampling Date	pH in Lab	Constituents in milligrams per litre (mg/L)										Total Alkalinity (as mg/L CaCO ₃)	Total Hardness (as mg/L CaCO ₃)	Total Dissolved Solids (mg/L)	Specific Conductance in Lab (µmho/cm at 25° C)
			Total Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (as CaCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃ - N as N)				
94	—	7.5	0.75	—	—	—	—	—	—	36	—	1.25	203	380	—	—
146	18/7/79	7.8	0.14	59	15	2	0.9	161	33	13	0.1	0.6	161	208	260	403
225	—	7.9	0.32	—	—	—	—	—	—	8	—	0.12	213	174	—	—
495	5/12/62	7.6	0.22	—	—	—	—	—	8	549	—	—	112	380	—	—
521	5/12/62	7.7	0.10	—	—	—	—	—	0	394	—	—	108	354	—	—
525	—	7.9	0.48	—	—	—	—	—	—	5	—	0.03	208	106	—	—
535	4/7/79	7.8	0.06	60	12	10	1.1	197	20	2	0.1	0.3	197	200	265	405
1265	25/7/79	7.4	1.18	96	21	6	1.1	269	26	7	0.1	8.6	269	326	425	610
2565	4/7/79	7.8	0.26	34	14	72	8.6	262	1	34	0.4	<0.1	262	142	330	580
3574	18/12/62	7.6	0.00	—	—	—	—	—	72	259	—	—	342	676	—	—
3663	4/7/79	7.2	0.05	157	37	26	6.0	377	99	63	0.1	11	377	544	785	1100
3880	4/7/79	8.4	0.10	9	4	57	0.7	112	<1	36	0.5	<0.1	113	40	210	325
4091	22/6/77	8.3	0.25	115	16	15	1.2	273	50	26	0.1	7.7	273	355	485	685
4200	24/11/66	7.8	2.0	39	29	110	—	—	5	151	—	—	254	220	—	—
4214	14/6/65	7.5	4.3	—	—	—	—	—	—	53	0.2	—	467	378	—	—
4221	14/6/65	7.5	3.5	—	—	—	—	—	—	58	0.2	—	455	390	—	—
4224	7/7/58	7.9	3.4	—	—	—	—	—	—	32	—	—	418	372	—	—
4235	—	7.2	1.43	—	—	—	—	—	—	50	—	0.15	197	84	—	—
4282	—	8.5	0.15	—	—	—	—	—	1	15	—	0.00	274	224	—	—
4287	—	8.3	2.50	—	—	—	—	—	1	18	—	0.91	186	154	—	—
4304	12/10/72	7.9	0.65	28	—	66	—	—	—	—	—	—	—	—	—	—
4363	—	7.8	0.90	—	—	—	—	—	5	2	—	0.33	274	224	—	—
4544	—	7.9	0.63	—	—	—	—	—	—	2	—	0.16	200	190	—	—
4571	—	7.8	2.50	—	—	—	—	—	—	8	—	0.16	253	288	—	—
4828	25/7/79	7.2	0.18	165	22	135	5.5	397	38	225	<0.1	21	397	501	1110	1590
4988	25/7/79	7.5	0.11	115	21	48	1.6	195	18	165	<0.1	9.3	195	376	855	985
5125	22/6/77	8.3	0.25	115	16	15	1.2	273	50	26	0.1	7.7	273	355	485	685
5140	22/6/77	8.0	0.50	46	24	11	1.0	236	4	2	0.2	<0.1	236	212	289	409
5179	28/7/77	7.9	1.0	35	21	109	1.5	280	3	80	0.4	<0.1	280	172	482	800
5260	2/8/67	7.2	0.15	—	—	—	—	—	—	353	—	—	422	930	—	—
6282	8/8/78	7.3	<0.05	128	30	22	1.9	294	84	35	0.1	1.4	294	444	750	840
8015	18/7/79	8.1	0.07	21	9	87	1.8	172	4	71	0.4	<0.1	172	87	355	550
8808	18/7/79	7.9	0.78	40	17	16	0.7	225	1	<1	0.1	<0.1	225	192	260	401
8820	4/7/79	7.7	3.8	103	16	9	1.4	246	68	12	0.1	<0.1	246	324	410	590
8987	4/7/79	8.0	08	64	17	4	1.0	208	18	2	0.1	3.5	208	230	285	440
9071	4/7/79	7.8	1.88	62	8	4	1.3	180	16	1	0.1	<0.1	180	188	235	360
9125	20/11/72	8.0	0.70	145	—	—	—	—	—	2	—	<0.01	202	208	210	368
9913	25/7/79	7.4	<0.5	115	20	6	1.6	275	33	24	<0.1	10	275	372	430	700
11374	4/7/79	7.7	0.98	65	18	6	1.3	227	18	2	0.1	<0.1	227	236	285	450
11430	8/8/78	7.6	<0.05	83	25	4	2.1	261	52	2	0.1	0.3	261	310	460	550
11580	3/9/69	7.0	0.95	144	—	14	2.8	—	—	14	—	—	421	454	—	—
11782	10/8/78	7.8	0.11	73	18	6	1.7	264	41	9	0.1	1.3	264	256	400	460
12583	4/7/79	7.8	0.83	54	17	4	1.4	197	16	<1	0.1	<0.1	197	204	255	390
13012	4/7/79	7.9	1.5	53	20	6	1.4	216	13	2	0.1	<0.1	216	216	265	425
13554	4/7/79	7.9	1.07	44	17	19	1.2	200	2	15	0.2	<0.1	200	180	265	410

Table 3. Inorganic Chemical Analyses – Bedrock Wells
(sample locations shown on Map 3135-5)

Sample Number	Sampling Date	pH in Lab	Constituents in milligrams per litre (mg/L)										Total Alkalinity (as mg/L CaCO ₃)	Total Hardness (as mg/L CaCO ₃)	Total Dissolved Solids (mg/L)	Specific Conductance in Lab (µmho/cm at 25° C)
			Total Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (as CaCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃ - N as N)				
422	14/2/65	7.4	1.9	—	—	—	—	—	87	4	—	—	233	312	—	—
2559	20/6/79	7.7	0.19	52	31	13	2.7	244	31	5	0.3	0.5	244	254	305	500
4106	10/8/78	7.8	0.1	73	24	14	1.1	201	—	55	19	0.1	38	201	282	475
4232	14/6/65	7.4	26.0	—	—	—	—	—	—	88	0.1	—	658	422	—	—
6822	18/7/79	7.7	0.15	74	19	225	11.1	216	36	350	0.5	1.6	216	264	935	1590
9136	18/7/79	7.9	1.10	35	22	190	8.8	265	6	227	0.7	<0.1	265	180	700	1220
10017	20/6/79	7.9	0.63	37	27	21	2.5	208	3	23	0.2	<0.1	208	202	270	465
10524	20/6/79	7.5	<0.5	136	50	110	9.5	342	46	252	0.1	1.9	342	536	1250	2700
12878	18/7/79	8.1	0.28	37	12	285	16.0	129	34	441	0.9	<0.1	129	144	950	1690

DESCRIPTIVE NOTES

The inorganic chemical quality of ground water at locations in the study area can be estimated by inspecting the analyses of nearby ground-water samples. Anal